

EMERGENCY PLAN PROCEDURES INDEX

PEACH BOTTOM UNITS 2 AND 3

EP Index

Page 1

Rev. 29 *

4/13/83 *

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| Number | Title | Review Date | Rev. No. | Revision Date |
|------------|---|-------------|----------|---------------|
| EP-101 | Classification of Emergencies | 04/13/83 | 7 | 04/13/83 * |
| EP-102 | Unusual Event Response | 04/13/83 | 7 | 04/13/83 * |
| EP-103 | Alert Response | 04/13/83 | 8 | 04/13/83 * |
| EP-104 | Site Emergency Response | 04/13/83 | 8 | 04/13/83 * |
| EP-105 | General Emergency Response | 04/13/83 | 8 | 04/13/83 * |
| EP-110 | Personnel Assembly and Accountability | 04/14/82 | 0 | 04/14/82 |
| EP-201 | Technical Support Center (TSC) Activation | 09/07/82 | 4 | 09/07/82 |
| EP-202 | Operational Support Center (OSC) Activation | 09/07/82 | 3 | 09/07/82 |
| EP-203 | Emergency Operations Facility (EOF) Activation | 09/07/82 | 4 | 09/07/82 |
| EP-205 | Radiation Protection Team Activation | 04/08/82 | 3 | 04/08/82 |
| EP-205A | Chemistry Sampling and Analysis Group | 05/25/82 | 4 | 05/25/82 |
| EP-205A .1 | Operation of Post Accident Sampling Station | 09/07/82 | 1 | 09/07/82 |
| EP-205A .2 | Obtaining Drywell Gas Samples from Containment Atmosphere Dilution Cabinets | 05/26/82 | 0 | 05/26/82 |
| EP-205A .3 | Retrieving and Changing Sample Filters and Cartridges from the Drywell Radiation Monitor During Emergencies | 05/25/82 | 0 | 05/25/82 |
| EP-205A .4 | Obtaining Drywell Gas Samples from the Drywell Radiation Monitor Sampling Station | 05/25/82 | 0 | 05/25/82 |
| EP-205A .5 | Obtaining Reactor Water Samples from Sample Sinks Following Accident Conditions | 05/25/82 | 0 | 05/25/82 |
| EP-205A .6 | Obtaining Canal Discharge Water Samples Following Radioactive Liquid Releases After Accident Conditions | 05/25/82 | 0 | 05/25/82 |
| EP-205A | Obtaining the Iodine and | | | |

EMERGENCY PLAN PROCEDURES INDEX

PEACH BOTTOM UNITS 2 AND 3

FP Index
Page 2
Rev. 29 *
4/13/83 *

| <u>Number</u> | <u>Title</u> | <u>Review Date</u> | <u>Rev. No.</u> | <u>Revision Date</u> |
|----------------|---|------------------------|---------------------|--------------------------|
| .7 | Particulate Samples from the Main Stack and Roof Vents Following Accident Conditions | 06/04/82 | 0 | 06/04/82 |
| EP-205A .8 | Obtaining Liquid Radwaste Samples from Radwaste Sample Sink Following Accident Conditions | 05/25/82 | 0 | 05/25/82 |
| EP-205A .9 | Obtaining Samples from Condensate Sample Sink Following Accident Conditions | 05/25/82 | 0 | 05/25/82 |
| EP-205A .10 | Obtaining Off-Gas Samples from the Off-Gas Hydrogen Analyzer Following Accident Conditions | 05/25/82 | 0 | 05/25/82 |
| EP-205A .11 | Sample Preparation and Chemical Analysis of Highly Radioactive Liquid Samples | 05/25/82 | 0 | 05/25/82 |
| EP-205A .12 | Sample Preparation and Analysis of Highly Radioactive Particulate Filters and Iodine Cartridges | 05/25/82 | 0 | 05/25/82 |
| EP-205A .13 | Sample Preparation and Analysis of Highly Radioactive Gas Samples | 05/25/82 | 0 | 05/25/82 |
| EP-205B | Radiation Survey Groups | 10/20/82 | 3 | 10/20/82 |
| EP-205C | Personnel Dosimetry Bioassay and Respiratory Protection Group | 04/08/82 | 2 | 04/08/82 |
| EP-206 | Fire and Damage Team Activation | 06/04/82 | 5 | 06/04/82 |
| EP-206A | Fire Fighting Group | 06/04/82 | 3 | 06/04/82 |
| EP-206B | Emergency Repair Group | 05/23/82 | 2 | 05/23/82 |
| EP-207 | Personnel Safety Team Activation | 05/11/82 | 4 | 05/11/82 |
| EP-207A | Search and Rescue | 04/13/83 | 3 | 04/13/83 * |
| EP-207B | Personnel Accountability | 05/11/82 | 3 | 05/11/82 |
| EP-207C | First Aid | 04/14/82 | 2 | 04/14/82 |
| EP-207D | Evacuation Assembly Group | 04/08/82 | 2 | 04/08/82 |
| EP-207E | Vehicle and Evacuee Control Procedure | 04/08/82 | 0 | 04/08/82 |

EMERGENCY PLAN PROCEDURES INDEX

PEACH BOTTOM UNITS 2 AND 3

EP Index

Page 3

Rev. 29 *

4/13/83 *

| <u>Number</u> | <u>Title</u> | <u>Review Date</u> | <u>Rev. No.</u> | <u>Revision Date</u> |
|------------------------|--|------------------------|---------------------|--------------------------|
| EP-207F | Vehicle Decontamination Procedure | 04/14/82 | 0 | 04/14/82 |
| EP-208 | Security Team | 04/01/81 | 0 | 04/01/81 |
| EP-209 | Telephone List For Emergency Use | 12/23/82 | 6 | 12/23/82 |
| EP-209 Appendix A | Immediate Notification Call List | 04/11/83 | 7 | 04/11/83 |
| EP-209 Appendix B | D E L E T E D | D E L E T E D | | |
| EP-209 Appendix C | Peach Bottom Station Supervision | 04/11/83 | 8 | 04/11/83 |
| EP-209 Appendix D-1 | On Site Emergency Team Leaders | 04/11/83 | 5 | 04/11/83 |
| EP-209 Appendix D-2 | Radiation Protection Team | 04/11/83 | 8 | 04/11/83 |
| EP-209 Appendix D-3 | Fire and Damage Team | 04/11/83 | 7 | 04/11/83 |
| EP-209 Appendix D-4 | Personnel Safety Team | 04/11/83 | 8 | 04/11/83 |
| EP-209 Appendix D-5 | Security Team | 04/11/83 | 4 | 04/11/83 |
| EP-209 Appendix D-6 | Re-Entry and Recovery Team | 04/11/83 | 3 | 04/11/83 |
| EP-209 Appendix D-7 | Technical Support Center Group | 04/11/83 | 7 | 04/11/83 |
| EP-209 Appendix E | Corporate Emergency Team Leaders and Support Personnel | 04/11/83 | 8 | 04/11/83 |
| EP-209 Appendix F | U. S. Government Agencies | 04/11/83 | 4 | 04/11/83 |
| EP-209 Appendix G | Emergency Management Agencies | 04/11/83 | 3 | 04/11/83 |
| EP-209 Appendix H | Company Consultants | 04/11/83 | 5 | 04/11/83 |
| EP-209 Appendix I-1 | Field Support Personnel | 04/11/83 | 10 | 04/11/83 |

EMERGENCY PLAN PROCEDURES INDEX

PEACH BOTTOM UNITS 2 AND 3

EP Index
Page 4
Rev. 29 *
4/13/83 *

| <u>Number</u> | <u>Title</u> | <u>Review Date</u> | <u>Rev. No.</u> | <u>Revision Date</u> |
|------------------------|---|------------------------|---------------------|--------------------------|
| EP-209 Appendix I-2 | Chemistry & Health Physics Contractor Call List | 04/11/83 | 7 | 04/11/83 |
| EP-209 Appendix J | Nearby Public and Industrial Users Of Downstream Waters | 04/11/83 | 4 | 04/11/83 |
| EP-209 Appendix K | Miscellaneous | 04/11/83 | 5 | 04/11/83 |
| EP-209 Appendix L | Local PECO Phones | 04/11/83 | 2 | 04/11/83 |
| EP-209 Appendix M | D E L E T E D | D E L E T E D | | |
| EP-209 Appendix N | Medical Support Groups | 04/11/83 | 5 | 04/11/83 |
| EP-209 Appendix P | Staffing Augmentation - 60 Minute Call Procedure | 04/11/83 | 5 | 04/11/83 |
| EP-301 | Operating the Evacuation Alarm and Pond Page System | 12/23/82 | 1 | 12/23/82 |
| EP-303 | Partial Plant Evacuation | 12/22/81 | 1 | 12/22/81 |
| EP-304 | D E L E T E D | | | |
| EP-305 | Site Evacuation | 09/07/82 | 4 | 09/07/82 |
| EP-306 | Evacuation of the Information Center | 05/25/82 | 2 | 05/25/82 |
| EP-307 | Reception and Orientation of Support Personnel | 04/12/82 | 0 | 04/12/82 |
| EP-311 | Handling Personnel with Serious Injuries, Radioactive Contamination Exposure, or Excessive Radiation Exposure Emergency Director Functions | 04/08/82 | 3 | 04/08/82 |
| EP-312 | Radioactive Liquid Release (Emergency Director Functions) | 04/13/83 | 1 | 04/13/83 * |
| EP-313 | Control of Thyroid Blocking (KI) Tablets | 04/08/82 | 0 | 04/08/82 |
| EP-316 | Cumulative Population Dose Calculations | 05/06/82 | 2 | 05/06/82 |
| EP-317 | Direct Recommendations to County Emergency Management and | | | |

EMERGENCY PLAN PROCEDURES INDEX

PEACH BOTTOM UNITS 2 AND 3

EP Index
Page 5
Rev. 29 *
4/13/83 *

| <u>Number</u> | <u>Title</u> | <u>Review Date</u> | <u>Rev. No.</u> | <u>Revision Date</u> |
|---------------|--|------------------------|---------------------|--------------------------|
| | Civil Defense Agencies | 04/14/82 | 0 | 04/14/82 |
| EP-318 | Liquid Release Dose Calculation Method for Intake Water at Downstream Facilities | 04/13/83 | 1 | 04/13/83 * |
| EP-319 | Liquid Release Dose Calculation Method for Fish | 04/13/83 | 1 | 03/13/83 * |
| EP-320 | Procedure for Leaking Chlorine | 03/12/82 | 1 | 03/12/82 |
| EP-325 | Use of the Containment Radiation Monitor to Estimate Release Source Term | 06/09/82 | 0 | 06/09/82 |
| EP-401 | Entry for Emergency Repair and Operations | 04/13/83 | 4 | 04/13/83 * |
| EP-500 | Review and Revision of Emergency Plan (FSAR Appendix 0) | 04/01/81 | 0 | 04/01/81 |

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Control Peach Bottom Units 2 and 3
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Office

EP-101

Page 1 of 3, Rev. 7

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4/13/83

EP-101 CLASSIFICATION OF EMERGENCIES

PURPOSE

To define the method of classification of an event or condition into one of four emergency classifications as described in the Emergency Plan. Additionally this procedure details the method of de-escalation from one emergency action level to another.

REFERENCES

1. Peach Bottom Atomic Power Station Emergency Plan
2. NUREG 0654 Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants.
3. EP 102, Unusual Event Immediate Actions
4. EP 103, Alert Immediate Actions
5. EP 104, Site Emergency Immediate Actions
6. EP 105, General Emergency Immediate Actions

ACTION LEVEL

Implemented this procedure whenever Shift Supervision detects conditions which meet the Emergency Action Levels in Appendix EP 101, Classification Table.

IMPLEMENTATION OF THIS PROCEDURE DOES NOT CONSTITUTE IMPLEMENTATION OF THE EMERGENCY PLAN.

PRECAUTIONS

THE JUDGEMENT OF THE EMERGENCY DIRECTOR IS VITAL IN PROPER CONTROL OF AN EMERGENCY AND TAKES PRECEDENCE OVER GUIDANCE IN THE EMERGENCY PLAN PROCEDURE.

IMMEDIATE ACTIONS

- 1.0 Shift Supervision or Emergency Director shall:
 - 1.1 Select affected categories related to station events or conditons.

IMMEDIATE ACTIONS (cont'd)

| <u>Category</u> | <u>Reference Pages in Appendix EP-101</u> |
|----------------------------------|---|
| Unplanned Shutdown | 1 |
| Personnel Injury | 2 |
| Primary Containment Integrity | 3 |
| Radioactive Material Release | 4 |
| Fire | 5 |
| Environmental | 6 |
| Loss of Power | 7 |
| Secondary Containment | 8 |
| Instrument Failure | 9 |
| Fuel Damage | 10 |
| Hazards to Station Operation | 11 |
| Control Room Evacuation | 12 |
| Security | See Contingency Plan |

- 1.2 Beginning at the indicated page in Appendix EP 101, review the Emergency Action Levels for all categories selected.
- 1.3 If the most severe events or conditions are classified as an Unusual Event, implement EP 102, "Unusual Event Response."
- 1.4 If the most severe events or conditions are classified as an Alert, implement EP 103, "Alert Immediate Response."
- 1.5 If the most severe events or conditions are classified as a Site Emergency, implement EP 104, "Site Emergency Response."
- 1.6 If the most severe events or conditions are classified as a General Emergency, implement EP 105, "General Emergency Response."

FOLLOW-UP ACTIONS

1.0 If event is classified as Alert, Site Emergency, or General Emergency, Shift Supervision or Emergency Director shall:

1.1 Periodically evaluate the event classification as listed on attached Appendix EP-101. Based upon results of corrective action taken to recover from the emergency situation, escalation or de-escalation of the emergency action level classification will be decided upon by the Emergency Director or Interim Emergency Director. (It is preferable, but not mandatory, to obtain concurrence from the Site Emergency Coordinator and Corporate Headquarters prior to classification reduction). The NRC and appropriate off-site authorities at the Emergency Operations Facility all be informed of the decision to move from one emergency class to the next. All agencies or personnel listed in checkoff lists of EP's 102, 103, 104, and 105 shall be informed as a minimum.

1.2 Provide written summary within eight hours to the NRC concerning basis and circumstances surrounding reduction of emergency action level or closeout of the emergency.

2.0 If event is classified as an Unusual Event, Shift Supervision or Emergency Director shall periodically evaluate the event classification as listed on attached Appendix EP-101 and escalate or de-escalate the emergency action level if necessary. All appropriate agencies or personnel shall be notified using the appropriate check-off lists of EP-102, 103, 104, 105.

3.0 When the emergency has been mitigated and the power plant and auxiliaries have been placed in a safe shutdown condition, only then will a decision be made as to whether a recovery phase is justified. To enter the recovery phase after the emergency or accident situation is considered no longer in effect, the concurrence of the Site Emergency Coordinator, Emergency Director, the Emergency Control Officer at Corporate Headquarters, and Federal and State Government Liaison is required. The recovery phase is a departure from an emergency situation. The Site Emergency Coordinator and Emergency Director evaluates plant operating conditions as well as the in-plant and out-of-plant radiological conditions in this decision. Notifications to the various individuals and agencies that the recovery phase has been implemented is the responsibility of the Site Emergency Coordinator.

| UNPLANNED SHUTDOWN | |
|--|--|
| UNUSUAL EVENT | ALERT |
| <p><u>UNPLANNED SHUTDOWN</u></p> <ol style="list-style-type: none"> 1) controlled shutdown due to failure to meet L.C.O. 2) any scram other than planned | <p><u>SCRAM WITH TRIPLE LO LEVEL</u></p> <ol style="list-style-type: none"> 1) scram alarm <u>and</u> 2) double low level alarm (-48") <u>and</u> 3) triple low level alarm (-130") <u>and</u> 4) increase in containment pressure to greater than 1 psig but less than 2 psig on PR-2/3508 <p><u>SCRAM WITH SMALL LEAK</u></p> <ol style="list-style-type: none"> 1) scram alarm <u>and</u> 2) double low level alarm (-48") <u>and</u> 3) triple low level alarm (-130") <u>and</u> 4) containment high pressure alarm (2 psig) <u>and</u> 5) containment pressure 2 psig or greater on PR 2/3508 |
| SITE EMERGENCY | GENERAL EMERGENCY |
| <p><u>SCRAM WITH LOCA</u></p> <ol style="list-style-type: none"> 1) scram alarm <u>and</u> 2) double low level alarm (-48") <u>and</u> 3) triple low level alarm (-130") <u>and</u> 4) containment high pressure alarm (2 psig) <u>and</u> 5a) containment pressure 10 psig or greater on PR 2/3508 <u>or</u> 5b) containment dose rate greater than 10^5 R/hr on RI-8/9103A/C and RI-8/9103B/D | <p><u>SCRAM WITH LOCA & NO ECCS</u></p> <ol style="list-style-type: none"> 1) scram alarm <u>and</u> 2) double low level alarm (-48") <u>and</u> 3) triple low level alarm (-130") <u>and</u> 4) active fuel range level indication shows less than -226" on LI-2/3-2-3-91A, B <u>and</u> 5) failure to reset triple low level alarm after 3 minutes <u>and</u> 6) containment high pressure alarm (2psig) <u>and</u> 7) containment pressure greater than 20 psig on PR-2/3508 <u>or</u> 8) containment dose rate greater than 10^6 R/hr on RI-8/9103A/C and RI-8/9103 B/D |

PERSONNEL INJURY

| UNUSUAL EVENT | ALERT |
|---|-------------------|
| <p><u>INJURIES REQUIRING AMBULANCE AND 48 HOUR TREATMENT</u></p> <p>1) Verbal reports or direct observation</p> <p><u>INJURY WITH EXCESS RADIATION EXPOSURE OR CONTAMINATION</u></p> <p>1) Contaminated injury warranting off-site medical treatment <u>or</u> 2) an acute whole body exposure greater than 3 R</p> | <p>N/A</p> |
| SITE EMERGENCY | GENERAL EMERGENCY |
| <p>N/A</p> | <p>N/A</p> |

| PRIMARY CONTAINMENT | |
|--|--|
| UNUSUAL EVENT | ALERT |
| <p><u>NON-ISOLABLE LEAKAGE</u></p> <ol style="list-style-type: none"> 1) Primary containment leakrate is greater than 0.5 percent of volume per 24 hrs. at 49.1 psig <u>or</u> 2) N₂ makeup system is not capable of maintaining pressure (not due to lack of N₂). <p><u>FAILURE TO ISOLATE PENETRATION WHEN ISOLATED BY A TRANSIENT</u></p> <ol style="list-style-type: none"> 1) incorrect valve position during Group I, II, or III isolation alarms | <p><u>LOSS OF PRIMARY CONTAINMENT INTEGRITY</u></p> <ol style="list-style-type: none"> 1) Reactor Building vent rad effluent high rad alarm and inability to maintain pressure greater than 0.25 psig on narrow range PR-2/3508 <u>or</u> 2) Torus Room flood alarm with level decrease in torus |
| SITE EMERGENCY | GENERAL EMERGENCY |
| <p><u>LOSS OF PRIMARY CONTAINMENT INTEGRITY WITH LOCA</u></p> <ol style="list-style-type: none"> 1) erratic containment pressure fluctuations above alarm setpoints of 1.5 psig, <u>and</u> 2) Group II and III isolation alarms, <u>and</u> 3) Containment dose rate greater than 10⁵ R/hr on RI-8/9103A/C and RI-8/9103B/D <u>and</u> 4) Reactor Building area high temperature alarm, <u>or</u> Area Radiation Monitors on PR 2/3-18-55 abnormally high, <u>and</u> Reactor Bldg. vent rad effluent high alarm, <u>or</u> Main Stack Rad effluent on PR 0-17-051 increasing due to SGTS operation. | <p>N/A</p> <p><u>SITE EMERGENCY continued</u></p> <p><u>POTENTIAL LOSS OF PRIMARY CONTAINMENT HIGH RADIATION</u></p> <ol style="list-style-type: none"> 1) containment high pressure alarm, (2.0 psig), <u>and</u> 2) scram, <u>and</u> 3) containment dose rate greater than 10⁵ R/hr on RI-8/9103A/C and RI-8/9103B/D, <u>and</u> 4) Reactor Bldg Area Rad Monitors Alarming, <u>and</u> 5) Vent Stack Rad Effluent monitor high alarm |

| RADIOACTIVE RELEASE | |
|---|--|
| UNUSUAL EVENT | ALERT |
| <p><u>INSTANTANEOUS RELEASE EXCEEDING TECH SPECS</u></p> <ol style="list-style-type: none"> 1) A spike on rad effluent monitors: <ol style="list-style-type: none"> a) Main Stack greater than 6×10^3 cps on RR 0-17-051, <u>or</u> b) Reactor Bldg vent greater than 4×10^4 cpm on RR-2/3979 <u>or</u> 2) Analysis of particulate filters or charcoal cartridge: <ol style="list-style-type: none"> a) Main Stack greater than 5×10^1 uCi/sec, <u>or</u> b) Reactor Bldg vent greater than 4×10^1 uCi/sec <p><u>RELEASE EXCEEDING TECH SPEC QUARTERLY LIMIT</u></p> <ol style="list-style-type: none"> 1) A report of the summation of individual release data within the quarterly period. | <p><u>ACTUAL OR POTENTIAL RELEASE 0.01 REM WHOLE BODY OR 0.05 REM THYROID</u></p> <ol style="list-style-type: none"> 1) Uncontrollable release for more than 20 minutes from the: <ol style="list-style-type: none"> a) main stack greater than 1×10^3 cps on RR 0-17-051 <u>or</u> b) Reactor Bldg vent greater than 5×10^4 cpm on RR-2/3979 <u>or</u> 2) Continued particulate or iodine release such that analysis of particulate filter or charcoal cartridge results in the following estimated release rates: <ol style="list-style-type: none"> a) main stack greater than 5×10^2 uCi/sec <u>or</u> b) Reactor Bldg vent greater than 3×10^3 uCi/sec <u>or</u> 3) Containment dose rate greater than 10^4 R/hr on RI-8/9103 A/C and RI-8/9103 B/D |
| SITE EMERGENCY | GENERAL EMERGENCY |
| <p><u>ACTUAL OR POTENTIAL RELEASE 0.1 REM WHOLE BODY OR 0.5 REM THYROID</u></p> <ol style="list-style-type: none"> 1) Uncontrollable release for more than 20 minutes from the: <ol style="list-style-type: none"> a) main stack greater than 1×10^4 cps on RR 0-17-051 <u>or</u> b) Reactor Bldg. vent greater than 5×10^5 cpm on RR-2/3979 <u>or</u> 2) continued particulate or iodine release such that analysis of particulate filter or charcoal cartridge results in the following estimated release rates: <ol style="list-style-type: none"> a) main stack greater than 5×10^3 uCi/sec <u>or</u> b) Reactor Bldg vent greater than 3×10^4 uCi/sec <u>or</u> 3) containment dose rate greater than 10^5 R/hr on RI-8/9103A/C and RI-8/9103B/D | <p><u>ACTUAL OR POTENTIAL RELEASE 1.0 REM WHOLE BODY OR 5.0 REM THYROID</u></p> <ol style="list-style-type: none"> 1) Uncontrollable release for more than 20 minutes from the: <ol style="list-style-type: none"> a) main stack greater than 1×10^5 cps on RR 0-17-051 <u>or</u> b) Reactor Bldg vent greater than 5×10^6 cpm on RR 2/3979 <u>or</u> 2) continued particulate or iodine release such that analysis of particulate filter or charcoal cartridge results in the following estimated release rates: <ol style="list-style-type: none"> a) main stack greater than 5×10^4 uCi/sec <u>or</u> b) Reactor Bldg vent greater than 3×10^5 uCi/sec <u>or</u> 3) containment dose rate greater than 10^6 R/hr on RI-8/9103A/C and RI-8/9103B/D |

| FIRE | |
|---|--|
| UNUSUAL EVENT | ALERT |
| <p><u>FIRE IN PROTECTED AREA LASTING 10 MIN. OR MORE AFTER INITIAL ATTEMPTS TO EXTINGUISH IT</u></p> <p>1) Alarm and verbal report from SSV</p> | <p><u>FIRE WHICH COULD MAKE AN ECCS INOP</u></p> <p>1) Fire alarm and verbal report from SSV</p> |
| SITE EMERGENCY | GENERAL EMERGENCY |
| <p><u>FIRE WHICH MAKES AN ECCS INOP</u></p> <p>1) Fire alarm and verbal report from SSV</p> | <p><u>FIRE WHICH CAUSES DAMAGE TO PLANT SYSTEMS SUFFICIENT TO LEAD TO OTHER GENERAL EMERGENCIES</u></p> <p>1) Fire alarm and verbal report from SSV, and LOCA symptoms, ECCS, or containment failure</p> |

| ENVIRONMENTAL | |
|---|--|
| UNUSUAL EVENT | ALERT |
| <p><u>EARTHQUAKE</u></p> <p>1) An actual earthquake detected by seismic instrumentation systems</p> <p><u>ABNORMAL POND LEVEL</u></p> <p>1) Conowingo Pond level on LI-2/3278A, B,C: a) greater than 113 feet <u>or</u> b) less than 104 feet without prior notification by L.D.</p> <p><u>TORNADO</u></p> <p>1) A tornado is observed on site</p> <p><u>HURRICANE</u></p> <p>1) Hurricane is expected to cross the station</p> | <p><u>EARTHQUAKE</u></p> <p>1) An actual earthquake beyond the Operating Basis Earthquake (OBE)</p> <p><u>ABNORMAL POND LEVEL</u></p> <p>1) Conowingo Pond level on LI-2/3278A,B, C: a) greater than 115 feet <u>or</u> b) less than 98.5 feet without prior notification by L.D.</p> <p><u>TORNADO</u></p> <p>1) A tornado strikes the Power Block with identifiable plant damage</p> <p><u>HURRICANE</u></p> <p>1) Station is experiencing a hurricane with winds greater than 100 mph</p> |
| SITE EMERGENCY | GENERAL EMERGENCY |
| <p><u>EARTHQUAKE</u></p> <p>1) An earthquake greater than Design Earthquake as detected on seismic instruments</p> <p><u>ABNORMAL POND LEVEL</u></p> <p>1) Conowingo Pond level on LI-2/3278A,B,C exceeding the following limits: a) greater than 116 feet <u>or</u> b) less than 87 feet</p> | |

LOSS OF POWER

| UNUSUAL EVENT | ALERT |
|---|--|
| <p data-bbox="287 278 695 336"><u>LOSS OF OFFSITE OR ONSITE: POWER</u></p> <ol data-bbox="199 370 816 646" style="list-style-type: none"> 1) turbine generator trip with Startup Auxiliary transformer SU2 and SU3 unavailable for service for more than 60 seconds <u>or</u> 2) loss of voltage on the four 4160 volt emergency busses or 480 volt load centers supplied from the four 4160 volt emergency busses for more than 60 seconds. | <p data-bbox="872 272 1500 329"><u>LOSS OF OFFSITE AND ONSITE AC POWER FOR LESS THAN 15 MINUTES</u></p> <ol data-bbox="877 363 1500 519" style="list-style-type: none"> 1) turbine generator trip with Startup Auxiliary transformer SU2 and SU3 unavailable for service <u>and</u> 2) failure of <u>all</u> diesel generators to energize their busses. <p data-bbox="877 549 1538 576"><u>LOSS OF ALL DC POWER FOR LESS THAN 15 MIN.</u></p> <ol data-bbox="877 612 1516 889" style="list-style-type: none"> 1) less than 105 volts on the 2/3A,B,C & D distribution panels as indicated on Panels 2/3AD03, 2/3CD03, 2/3BD03, 2/3DD03 <u>and</u> 2) less than 21 volts on the 24 volt distribution panels as indicated on Panels 2/3AD28, 2/3CD28, 2/3BD28, 2/3DD28 <u>and</u> 3) loss of <u>all</u> alarms |
| SITE EMERGENCY | GENERAL EMERGENCY |
| <p data-bbox="204 1215 822 1272"><u>LOSS OF OFFSITE AND ONSITE AC POWER FOR LONGER THAN 15 MINUTES</u></p> <ol data-bbox="204 1306 822 1491" style="list-style-type: none"> 1) turbine generator trip with SU2 and SU3 unavailable for service for longer than 15 minutes <u>and</u> 2) failure of <u>all</u> diesel generators to energize their busses for longer than 15 minutes <p data-bbox="204 1527 778 1585"><u>LOSS OF ALL 125 VDC POWER FOR LONGER THAN 15 MINUTES</u></p> <ol data-bbox="204 1619 839 1953" style="list-style-type: none"> 1) less than 105 volts on the 2/3A,B, C&D distribution panels as indicated on Panels 2/3AD03, 2/3CD03, 2/3BD03, 2/3DD03 for longer than 15 minutes <u>and</u> 2) less than 21 volts on the 24 volt distribution panels as indicated on Panels 2/3AD28, 2/3CD28, 2/3BD28, 2/3DD28 for longer than 15 min. <u>and</u> 3) loss of <u>all</u> alarms for longer than 15 min. | |

SECONDARY CONTAINMENT

| UNUSUAL EVENT | ALERT |
|---|--|
| <p><u>LOSS OF SECONDARY CONTAINMENT INTEGRITY</u></p> <p>1) loss of secondary containment integrity for greater than 12 hours</p> | <p style="text-align: center;">N/A</p> |
| SITE EMERGENCY | GENERAL EMERGENCY |
| <p style="text-align: center;">N/A</p> | <p style="text-align: center;">N/A</p> |

INSTRUMENT FAILURE

| UNUSUAL EVENT | ALERT |
|---|-------------------|
| <u>SIGNIFICANT LOSS OF ASSESSMENT OR COMMUNICATION CAPABILITY IN THE MAIN CONTROL ROOM</u> 1) complete loss of all Main Control Room communication equipment | N/A |
| SITE EMERGENCY | GENERAL EMERGENCY |
| N/A | N/A |

| FUEL DAMAGE | |
|--|--|
| UNUSUAL EVENT | ALERT |
| <p><u>POSSIBLE FUEL DAMAGE</u></p> <ol style="list-style-type: none"> 1) Air ejector discharge rad monitor high alarm <u>and</u> an increase of 500mR/hr within 30 minutes <u>or</u> a level of 2.5×10^3 mR/hr as indicated on RR-2/3-17-152, <u>or</u> 2) high reactor coolant activity as determined by sample analysis equal to or greater than 2 uCi/gm dose equivalent I-131 | <p><u>FUEL DAMAGE</u></p> <ol style="list-style-type: none"> 1) Air ejector discharge rad monitor indicating greater than 2.5×10^4 mR/hr on RR 2/3-17-152, <u>or</u> 2) High coolant activity of 300 uCi/gm dose equivalent I-131, <u>and</u> main steam line high-high radiation alarm with resultant scram alarm, <u>or</u> 3) spent fuel damage resulting in a refueling floor area radiation monitor alarm <u>or</u> a high radiation alarm on refuel floor exhaust rad monitor |
| SITE EMERGENCY | GENERAL EMERGENCY |
| <p><u>FUEL DAMAGE</u></p> <ol style="list-style-type: none"> 1) Following conditions occur: <ol style="list-style-type: none"> a) failure of control rods to fully insert on a scram <u>and</u> b) higher than normal readings on LPRMs adjacent to not-fully-inserted rods <u>and</u> c) at least 2 of the 4 containment rad monitors indicate levels greater than 10^5 R/hr on RI-8/9103A/C and RI-8/9103B/D. 2) Major damage to spent fuel in fuel pool or uncovering of spent fuel as confirmed by a fuel pool area radiation monitor alarm and: <ol style="list-style-type: none"> a) refuel floor exhaust radiation monitor high alarm, <u>or</u> b) refuel floor area radiation monitor alarm <u>or</u> 3) Observed major damage to spent fuel | <p><u>FUEL DAMAGE</u></p> <ol style="list-style-type: none"> 1) When at least 2 of 4 containment rad monitors indicate levels greater than 10^6 R/hr on RI-8/9103A/C and RI-8/9103B/D <u>and</u> containment pressure exceeds 10 psig on PR 2/3508 |

HAZARDS

| UNUSUAL EVENT | ALERT |
|---|---|
| <p data-bbox="346 276 611 308"><u>MODERATE HAZARDS</u></p> <ol data-bbox="189 340 801 595" style="list-style-type: none"> 1) Aircraft crash on or near site as determined by Shift Supervision <u>or</u> 2) Significant explosion on or near site as determined by Shift Supervision <u>or</u> 3) Toxic gas release on or near site as determined by Shift Supervision | <p data-bbox="1040 276 1272 308"><u>SEVERE HAZARDS</u></p> <ol data-bbox="859 340 1528 649" style="list-style-type: none"> 1) Aircraft crash on the facility or missile impacts into the Reactor Bldg. Diesel Generator Bldg. or HPSW pump structure as determined by Shift Supervision <u>or</u> 2) Explosion damage to facility affecting plant safety as determined by Shift Supervision <u>or</u> 3) Chlorine gas detected in the Control Room |
| SITE EMERGENCY | GENERAL EMERGENCY |
| | |

CONTROL ROOM EVACUATION

UNUSUAL EVENT

N/A

ALERT

REMOTE CONTROL ESTABLISHED

- 1) Evacuation of Main Control Room anticipated or required and control established at remote shutdown panels as determined by Shift Supervision

SITE EMERGENCY

REMOTE CONTROL NOT ESTABLISHED

- 1) Evacuation of Main Control Room and control of shutdown systems not established at remote shutdown panels in 15 minutes as determined by Shift Supervision

GENERAL EMERGENCY

N/A

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PHILADELPHIA ELECTRIC COMPANY
PEACH BOTTOM UNITS 2 AND 3
EMERGENCY PLAN IMPLEMENTING PROCEDURE

EP-102
Page 1 of 5, Rev. 7
GG:1hd

RGK
APR 13 1983

EP-102 - UNUSUAL EVENT RESPONSE

PURPOSE

To define site response to an Unusual Event.

REFERENCES

1. Peach Bottom Atomic Power Station Emergency Plan
2. NUREG 0654
3. GP-15 Local Evacuation
4. EP-101 Classification of Emergencies

APPENDIX

EP 102-1 Unusual Event notification Checkoff List

IMMEDIATE ACTIONS

1.0 Shift Supervision shall:

- 1.1 Assume the role of Interim Emergency Director.
- 1.2 Activate Emergency Teams as necessary.
- 1.3 Direct the evacuation of affected areas as necessary.
Refer to the following procedure:
GP-15 Local Evacuation
- 1.4 Contact the Station Superintendent and the Shift Technical Advisor and inform them of the situation.
- 1.5 Fill out the Standard Prompt Notification message in Appendix EP 102-1 or 201-2, and give it to the assigned communicator (PO or higher classification) and direct the communicator to commence notification of the appropriate parties as specified in that appendix.

NOTE: DO NOT USE BLUE RINGDOWN PHONE FOR THESE CALLS.

- 1.6 Closely monitor conditions to determine present hazards to personnel and potential accident conditions that may develop.

2.0 Communicator shall:

- 2.1 Perform Notifications on Appendix EP 102-1 or EP-102-2 using the standard prompt Notification message included in the appendix. See EP 209, Appendix A for additional telephone numbers if necessary.

FOLLOW-UP ACTIONS

1.0 Emergency Director shall:

- 1.1 Periodically evaluate the event classification in accordance with EP 101, Classification of Emergencies and escalate or deescalate the classification as necessary.

If classification is de-escalated, fill out Appendix EP-102-2, give it to the communicator and direct the communicator to commence Notification of the appropriate parties as specified in that appendix.

Note: Do not use the Blue Ring-Down phones for these calls.

- 1.2 Determine which support personnel are necessary for emergency functions and direct the Shift Clerk to contact those personnel. If Shift Clerk is not available this function shall be assigned to any available individual.

2.0 Shift Clerk shall:

- 2.1 Notify additional support personnel to report to the plant as directed by the Emergency Director.

APPENDIX EP 102-1
UNUSUAL EVENT NOTIFICATION CHECKOFF LIST

MESSAGE: THIS IS PEACH BOTTOM ATOMIC POWER STATION CALLING TO REPORT AN UNUSUAL EVENT. PLEASE CONNECT ME TO THE APPROPRIATE AUTHORITY. THIS (IS) (IS NOT) A DRILL. THIS (IS) (IS NOT) A DRILL. THIS IS PEACH BOTTOM ATOMIC POWER STATION CALLING TO REPORT AN UNUSUAL EVENT HAS BEEN DECLARED ON UNIT NO. _____. THIS IS NOT AN EMERGENCY CONDITION. TIME AND DATE OF UNUSUAL CLASSIFICATION IS _____. THE BASIC PROBLEM IS _____. THE PLANT STATUS IS (STABLE AND ALL PERSONNEL AND EQUIPMENT ARE IN A SAFE CONDITION, THEREFORE THERE WILL BE NO FURTHER Notification) (STABLE) (IMPROVING) (DEGRADING) (NOT KNOWN). THERE (HAS BEEN) (HAS NOT BEEN) AND (AIRBORNE)-(LIQUID) RADIOACTIVE RELEASE FROM THE PLANT. PROTECTIVE ACTIONS RECOMMENDED ARE (NONE) _____. THE AFFECTED POPULATION AREA IS (NONE) _____. MY NAME IS _____. THIS (IS) (IS NOT) A DRILL.

Notifications:

| Party | Name of Person Responding | Time of Notification | Communicator's Initials |
|---|---------------------------|----------------------|-------------------------|
| Station Supt. | _____ | _____ | _____ |
| Load Dispatcher | _____ | _____ | _____ |
| NRC Operations Center (Red Phone) | _____ | _____ | _____ |
| Pennsylvania Emergency Management Agency | _____ | _____ | _____ |
| York County Emergency Management Agency | _____ | _____ | _____ |
| PA. Bureau of Rad. Protection (White Phone or | _____ | _____ | _____ |

APPENDIX EP 102-1 (Cont'd)
UNUSUAL EVENT NOTIFICATION CHECKOFF LIST

Manager-Public
Information

or pager

PBAPS Guard Sergeant

(Only make this call if an ambulance or the fire company has been
called).

Time Notifications of above parties completed

Verified By

(Emerg. Director)

Date

APPENDIX EP 102-2
UNUSUAL EVENT DE-ESCALATION CHECKOFF LIST

MESSAGE: THIS IS PEACH BOTTOM ATOMIC POWER STATION CALLING TO DE-ESCALATE
AN UNUSUAL EVENT. PLEASE CONNECT ME WITH THE APPROPRIATE AUTHORITY. THIS
(IS) (IS NOT) A DRILL. THIS (IS) (IS NOT) A DRILL. THIS IS PEACH BOTTOM
ATOMIC POWER STATION CALLING TO REPORT THE TERMINATION OF AN UNUSUAL EVENT.
THERE IS NO POTENTIAL FOR SAFETY* DEGRADATION. MY NAME IS _____.
TIME AND DATE IS _____. THIS (IS) (IS NOT) A DRILL.

Notifications:

| Party | Name of Person Responding | Time of Notification | Communicator's Initials |
|---|------------------------------|-------------------------|----------------------------|
| Station Supt. | _____ | _____ | _____ |
| Load Dispatcher | _____ | _____ | _____ |
| NRC Operations Center (Red Phone) | _____ | _____ | _____ |
| Pennsylvania Emerg- ency Management Agency | _____ | _____ | _____ |
| York County Emerg- ency Management Agency | _____ | _____ | _____ |
| PA. Bureau of Rad. Protection (White Phone or | _____ | _____ | _____ |
| Manager-Public Information or pager | _____ | _____ | _____ |
| PBAPS Guard Sergeant | _____ | _____ | _____ |

(Only make this call if an ambulance or the fire company has been
called).

Time Notifications of above parties completed _____.

Verified By _____ Date _____
(Emerg. Director)

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EP-103
Page 1 of 11, Rev. 8
GG:tth

APR 13 1983

EP-103 ALERT RESPONSE

PURPOSE

To define site response to an Alert.

REFERENCES

1. Peach Bottom Atomic Power Station Emergency Plan
2. NUREG 0654
3. GP-15 Local Evacuation
4. EP-101 Classification of Emergencies

APPENDICES

- EP-103-1 Alert Notification Checkoff List
- EP-103-2 Personnel Call Record
- EP-103-3 Emergency Exposure Limits (Emergency Plan Table 6.1)

PRECAUTIONS

1. Planned radiation exposures should be limited to the administrative guide levels in Appendix EP 103-3, Emergency Exposure Limits.

IMMEDIATE ACTIONS

1.0 Shift Supervision shall:

- 1.1 Assume the role of Interim Emergency Director.
- 1.2 Activate Emergency Teams as necessary.
- 1.3 Direct the evacuation of affected areas as necessary.
Refer to the following procedures:

GP-15 Local Evacuation
EP-303 Partial Plant Evacuation
EP 305 Site Evacuation

EP 306 Evacuation of the Information Center

- 1.4 Contact the Station Superintendent and the Shift Technical Advisor, inform them of the situation.
 - 1.5 Fill out the Standard Prompt Notification message check-off Appendix EP 103-1 and give it to the communicator (PO or higher classification) and direct the Communicator to commence notification of the appropriate parties as specified in Section 2.1 of this procedure. The Communicator shall man the NRC RED telephone on a continuous basis if required by procedure A-31. If communicator is required for urgent plant operations related to the emergency, the concurrence for securing the phone should be obtained from the NRC prior to securing this telephone.
 - 1.6 Direct the Shift Clerk to activate the 60 minute call list using EP 209 APP P. If Shift Clerk is not available, this function shall be assigned to any available individual.
 - 1.7 Direct one of the on-shift I&C Technicians to activate the Technical Support Center and Emergency Operations Facility in accordance with EP 201 and EP-203. Inform shift clerk which I&C technician will activate the centers at Unit 1 in order that the clerk will know which remaining I&C technician to call for the prompt mobilization procedure.
 - 1.8 Direct the Personnel Safety Team Leader to initiate site radiation surveys as necessary, in accordance with EP-205B, Radiation Survey Groups.
 - 1.9 Assign an Operations Support Center Coordinator (senior shift PO or APO available) and direct available shift personnel to report to the Operations Support Center on 135' elev. turbine bldg. and to activate it in accordance with EP 202, if habitable. If this Operations Support Center is NOT habitable, direct shift personnel to report to the Control Room.
 - 1.10 Closely monitor conditions to determine present hazards to personnel and potential accident conditions that may develop.
 - 1.11 If release has occurred, dispatch a plant survey team member to obtain a site boundary dose rate as soon as practicable.
 - 1.12 If necessary, initiate implementation of EP-317 & EP-316. Direct recommendations to County Emergency Management Agencies and cumulative population dose calculations.
- 2.0 Communicator shall:
- 2.1 Perform notifications on Appendix 103-1 using the alert Notification Check Off Appendix EP 103-1. See EP 209, Appendix A for additional telephone numbers.

- 2.2 Report to the Emergency Director or Interim Emergency Director when notifications are complete.
- 2.3 Man the RED NRC telephone if required by A-31 until situation stabilizes and RED telephone communication may be secured.
- 3.0 Operations Support Center Coordinator or his designee shall:
 - 3.1 Activate the Operations Support Center on 135' elev. turbine bldg, if it is habitable, in accordance with EP 202. If this Operations Support Center is not habitable, report to the Control Room.
- 4.0 Personnel Safety Team Leader shall:
 - 4.1 Initiate site radiation surveys in accordance with EP-205B, Radiation Survey Groups when directed by the Emergency Director. (The HP field office on 116' elev. turb. bldg. will serve as the HP&C OSC).
- 5.0 Shift I&C Technician shall:
 - 5.1 Activate the TSC and EOF when directed by Interim Emergency director in accordance with EP 201 using Appendix EP-201-2.
- 6.0 Shift Clerk shall:
 - 6.1 Contact individuals on EP 209 APP P to call in those individuals to man TSC and required Emergency Teams (60 minute call list). Document contacts on EP 209 APP P.
 - 6.2 Inform Interim Emergency Director or Emergency Director when contacts are completed.

FOLLOW-UP ACTIONS

1.0 Emergency Director shall:

- 1.1 Periodically evaluate the event classification in accordance with EP 101, Classification of Emergencies, and escalate or deescalate the classification, as necessary.
- 1.2 Obtain the results of the Cumulative Population Dose Calculations from the Radiation Protection Team Leader and onsite radiation surveys from the Personnel Safety Team Leader, as necessary.
- 1.3 Perform actions as necessary to mitigate conditions of the emergency situation.
- 1.4 Determine which additional support personnel are necessary for emergency functions and direct the Shift Clerk or other assigned communicator in TSC to contact those personnel.
- 1.5 Provide site personnel with P.A. speaker announcements for any major changes in plant emergency status, such as changing emergency action levels and evacuations.

2.0 Station Superintendent shall:

- 2.1 Report to the Technical Support Center or Control Room for a briefing of the situation.
- 2.2 Assume the role of Emergency Director by formally relieving the Interim Emergency Director (Shift Superintendent). Announce that he has assumed the role of Emergency Director to the assembled Technical Support Center personnel.
- 2.3 Verify the emergency classification.
- 2.4 Verify that the Technical Support Center, the Emergency Operations Facility, and the Operations Support Center have been activated.

3.0 Operations Support Center Coordinator shall:

- 3.1 Notify the Interim Emergency Director when their respective Operations Support Center is activated.
- 3.2 Support the Control Room and Shift Supervision as necessary.

4.0 Radiation Protection Team Leader shall:

- 4.1 Report progress and results of Cumulative Population Dose Calculations to the Emergency Director as necessary.

5.0 Personnel Safety Team Leader shall:

- 5.1 Report progress and results of onsite radiation surveys to the Emergency Director as necessary.

6.0 Shift Clerk or assigned TSC communicator shall:

- 5.1 Notify additional support personnel to report to the plant as directed by the Interim Emergency Director. Refer to EP 209. Document on APP EP-103-2.
- 5.2 Notify the Interim Emergency Director when the additional support personnel have been notified.

7.0 Shift I&C Technician shall:

- 6.1 Inform the Interim Emergency Director when the TSC and EOF are activated.
- 6.2 Station himself at the TSC as data display (CCTV) operator as directed by the Emergency Director.

APPENDIX EP 103-1
ALERT CHECKOFF LIST

MESSAGE: This (is) (is not) a drill. This (is) (is not) a
drill. This is Peach Bottom Atomic Power Station calling to report
an Alert has been declared on Unit No. _____. Time and date of Alert
classification is _____. The basic problem is _____

_____.

The plant status is (stable) (improving) (degrading) (not known).
There (is presently) (has not been) (is potential for) (has been) a
radioactive (airborne) (liquid) release from the plant (at a level
below that considered a public hazard) (at a level at which protective
action is advisable). Recommended protective actions are (none)

_____. The affected population area is
(none) _____. My name is _____
_____. This (is) (is not) a drill. This (is) (is not) a drill.

NOTIFICATIONS:

| <u>PARTY</u> | <u>PERSON RESPONDING</u> | <u>TIME OF NOTIFICATION</u> | <u>COMMUNICATOR'S INITIALS</u> |
|---|------------------------------|---------------------------------|------------------------------------|
| Station Superintendent | _____ | _____ | _____ |
| Load Dispatcher | _____ | _____ | _____ |
| (Tell him to initiate call list "C") | | | |
| Pennsylvania Emergency Management Agency* (Blue Phone or _____) | _____ | _____ | _____ |
| Maryland Civil Defense Agency (Blue Phone or _____) | _____ | _____ | _____ |
| York County Emergency Management Agency (Blue Phone or _____) | _____ | _____ | _____ |

APPENDIX EP 103-1 (Cont'd)
ALERT CHECKOFF LIST

| | | | |
|--|-------|-------|-------|
| Lancaster County Emergency Management Agency (Blue Phone or | _____ | _____ | _____ |
| Chester County Emergency Management Agency (Blue Phone or | _____ | _____ | _____ |
| Harford County Civil Defense Agency (Blue Phone or | _____ | _____ | _____ |
| Cecil County Civil Defense Agency (Blue Phone or | _____ | _____ | _____ |
| NRC Operations Center (Red Phone) | _____ | _____ | _____ |
| PA BRP (White Phone or | _____ | _____ | _____ |
| PBAPS Guard Sergeant | _____ | _____ | _____ |

Time notifications of parties above completed _____.

Verified By _____ Date _____
Emergency Director

*Must notify PEMA by use of commercial telephone no. on
backshifts. (Blue Phone not manned by PEMA on
backshifts).

File under Sys-3-1

APPENDIX EP 103-2
PERSONNEL CALL RECORD

[illegible]

File Sys-3-1

APPENDIX EP 103-3
Emergency Exposure Limits

| <u>Function</u> | <u>Projected Whole Body Dose</u> | <u>Thyroid Dose</u> | <u>Authorized By</u> |
|--|--|--|--------------------------|
| 1. Life Saving and Reduction of Injury | 75 rem* | 375 rem | Emergency** Director |
| 2. Operation of Equipment to Mitigate an Emergency | 25 rem* | 125 rem | Emergency** Director |
| 3. Protection of Health and Safety of the Public | 5 rem | 25 rem | Emergency Director |
| 4. Other Emergency Activities | 10 CFR 20 limits | 10 CFR 20 limits | Emergency Director |
| 5. Re-entry/Recovery Activities | Administra- tive Guide- lines | Adminis- trative Guide- lines | N/A |

*Reference: EPA-520/1-75-001 Table 2.1

**Such exposure shall be on a voluntary basis

APPENDIX EP-103-4
ALERT, DEESCALATION NOTIFICATION CHECK-OFF LIST

MESSAGE: This (is) (is not) a drill. This (is) (is not) a drill.

This is Peach Bottom Atomic Power Station calling to report a change in emergency action level. The alert has been deescalated to an Unusual Event.

Time and date is _____. The basic problem is _____

_____. The plant status is (stable) (improving) (degrading) (not known). There (has been) (has not been) an (airborne)

(liquid) radioactive release from the plant. Protective actions recommended are (none) _____.

The affected population area is (none) _____. My name is _____. This (is) (is not) a drill.

Notifications:

| Party | Person Responding | Time of Notification | Communicator's Initials |
|---|-------------------|----------------------|-------------------------|
| Station Superintendent | _____ | _____ | _____ |
| Load Dispatcher | _____ | _____ | _____ |
| (Tell him to initiate call list "C") | | | |
| Pennsylvania Emergency Management Agency* (Blue phone or _____) | _____ | _____ | _____ |
| Maryland Civil Defense Agency (Blue phone or _____) | _____ | _____ | _____ |
| York County Emergency Management Agency (Blue phone or _____) | _____ | _____ | _____ |
| Lancaster County Emergency Management Agency (Blue phone or _____) | _____ | _____ | _____ |

APPENDIX EP-103-4
ALERT, DEESCALATION NOTIFICATION CHECK-OFF LIST

Chester County Emer-
gency Management
Agency
(Blue phone or _____)

Harford County Civil
Defense Agency
(Blue phone or _____)

Cecil County Civil
Defense Agency
(Blue phone or _____)

Pennsylvania State
Police - York _____

PA. BRP
(White Phone or _____)

NRC Operations Center**
(Red Phone) _____

PBAPS Guard Sergeant _____

Time notification of parties above completed. _____

Verified by _____

Date _____

Emergency Director

File Sys-3-1

* Must notify PEMA by use of commercial telephone no. on backshifts.
(Blue phone not manned by PEMA on backshifts).

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EP-104
Page 1 of 11, Rev. 8
GG:tth

APR 13 1983

EP-104 SITE EMERGENCY RESPONSE

PURPOSE

To define the site response to a Site Emergency.

REFERENCES

1. Peach Bottom Atomic Power Station Emergency Plan
2. NUREG 0654
3. EP-101. Classification of Emergencies

APPENDICES

- EP 104-1 Site Emergency Notification Checkoff List
EP-104-2 Personnel Call Record
EP 104-3 Emergency Exposure Limits (Emergency Plan Table 6.1)

PRECAUTIONS

1. Planned radiation exposures should be limited to the administration guide levels in Appendix EP 104-3, Emergency Exposure Limits.

IMMEDIATE ACTIONS

1.0 Shift Supervision shall:

- 1.1 Assume the role of Interim Emergency Director.
- 1.2 If not already done at an earlier emergency action level, activate Emergency Teams as necessary.
- 1.3 Contact the Station Superintendent and the Shift Technical Advisor, inform them of the situation.
- 1.4 Fill out Appendix EP 104-1 Standard Prompt Notification Message and give it to the Communicator (PO or higher classification) and Direct the Communicator to commence notification of the appropriate parties as specified in Section 2.1 of this procedure. The Communicator shall man the NRC RED Telephone on a continuous basis, if required by A-31. If Communicator is required for urgent plant operations related to the emergency, the concurrence for securing

the phone should be obtained from NRC prior to securing this telephone.

- 1.5 If not already accomplished at the ALERT stage, direct the shift clerk to activate the 60 minute call list using EP 209 APP P. If shift clerk is not available, this function may be assigned to any available individual.
- 1.6 Direct one of the on-shift I&C technicians to activate the Technical Support Center and Emergency Operations Facility in accordance with EP 201 and 203 if not already activated. If not already performed previously, inform the shift clerk which I&C Technician will activate the centers at Unit 1 in order to let the clerk know which remaining I&C Technician to call for the prompt mobilization procedure.
- 1.7 Direct the Radiation Protection Team Leader to initiate on- and off site radiation surveys, as necessary, if not already done in accordance with EP 205B, Radiation Survey Groups.
- 1.8 Assign an Operations Support Center coordinator (Senior PO or APO available) if not already done and direct available shift personnel to report to this Operations Support Center and to activate it in accordance with EP 202 if habitable. If this Operations Support Center is not habitable, direct shift personnel to report to the Control Room.
- 1.9 Closely monitor conditions to determine present hazards to personnel and potential accident conditions that may develop.
- 1.10 If release has occurred, dispatch a plant survey team member to obtain a site boundary dose rate as soon as practicable.
- 1.11 If necessary, initiate implementation of EP-317 and EP-316, Direct Recommendations to County Emergency Management Agencies, and Cumulative Population Dose Calculations.

2.0 Communicator shall:

- 2.1 Perform notifications on Appendix 104-1 using the Standard Prompt Notification Message included. See EP-209 Appendix A for additional telephone numbers, if required.
- 2.2 Report to the Emergency Director when the notifications are completed.
- 2.3 Man the RED NRC telephone if required by A-31 until situation stabilizes and RED telephone communications may be secured.

3.0 Operations Support Center Coordinator or his designee shall:

- 3.1 Activate the Operations Support Center on 135' elev turb bldg, if it is habitable, in accordance with EP 202. If this Operations Support Center is NOT habitable report to the Control Room.

4.0 Radiation Protection Team Leader shall:

- 4.1 Initiate on- and off site radiation surveys in accordance with EP 205B, Radiation Survey Groups, when directed by the Emergency Director. If this person is the HP Engineer he should report to the EOF to coordinate this function.

5.0 Shift I&C Technician shall:

- 5.1 Activate the TSC and EOF (if not already activated during ALERT stage) in accordance with EP 201 using Appendix EP-201-2 and procedure EP-203.

6.0 Shift Clerk shall:

- 6.1 If not already implemented during ALERT stage, contact individuals on EP 209 APP P to call in those individuals to man TSC and EOF (60 minute call list). Document contacts on EP 209 APP P.
- 6.2 Inform Interim Emergency Director or Emergency Director when contacts are completed.

FOLLOW-UP ACTIONS

1.0 Emergency Director shall:

- 1.1 Periodically evaluate the event classification in accordance with EP 101, Classification of Emergencies and escalate or deescalate the classification, as necessary.
- 1.2 Obtain results of the Cumulative Population Dose Calculations and offsite radiation surveys from the Radiation Protection Team Leader. Obtain Onsite and Plant Radiation Surveys from the Personnel Safety Team Leader, as necessary.
- 1.3 Provide appropriate information from the previous evaluations to Communicator in the EOF for notification of the Bureau of Radiation Protection.
- 1.4 Perform actions as necessary to mitigate conditions of the emergency situation.
- 1.5 Determine which additional support personnel are necessary for emergency functions and direct the shift clerk or other assigned communicator to contact those personnel.

- 1.6 Provide site personnel with P.A. speaker announcements for any major changes in plant emergency status, such as changing emergency action levels and evacuations.
- 1.7 Direct the Evacuation of affected areas as necessary. Refer to the following procedure:

- GP 15 Local Evacuation
- EP 303 Partial Plant Evacuation
- EP 306 Evacuation of the Information Center

2.0 Station Superintendent shall:

- 2.1 Report to the Technical Support Center or Control Room, for a briefing of the situation.
- 2.2 Assume the role of Emergency Director (if not already done) by formally relieving the interim Emergency Director of this responsibility. Announce that he has assumed the role of Emergency Director to the assembled Technical Support Center personnel.
- 2.3 Verify the emergency classification.
- 2.4 Verify that the Technical Support Center, Emergency Operations Facility and the Operations Support Center have been activated.

3.0 Operations Support Center Coordinator shall

- 3.1 Notify the Interim Emergency Director or Emergency Director when the Operations Support Center is activated.
- 3.2 Support the Control Room and Shift Supervision as necessary.

4.0 Radiation Protection Team Leader shall:

- 4.1 Notify the Emergency Director when the Emergency Operations Facility is manned.
- 4.2 Report progress and results of Cumulative Population Dose Calculations and off site radiation surveys to the Site Emergency Coordinator and Emergency Director as necessary.
- 4.3 Notify the Site Emergency Coordinator of the need for assistance from Radiation Management Corporation.

5.0 Shift Clerk or other assigned person shall:

- 5.1 If not already done, notify additional support personnel to report to the plant as directed by the Emergency Director. Refer to EP 209. Document on APP EP 104-2

5.2 Notify Emergency Director or Site Emergency Coordinator when the additional support personnel have been notified.

6.0 I&C Technicians shall: (if not already performed as per EP-103)

6.1 Inform the Emergency Director when the centers are activated, if not previously done.

6.2 Man the TSC or EOF data display (CCTV) positions as directed by the Emergency Director.

7.0 Personnel Safety Team Leader shall:

Report progress and results of onsite and inplant radiation surveys to the Site Emergency Coordinator and Emergency Director as necessary.

APPENDIX 104-1
SITE EMERGENCY NOTIFICATION CHECKOFF LIST

Message: This (is) (is not) a drill. This (is) (is not) a drill. This is Peach Bottom Atomic Power Station calling to report a site emergency has been declared on Unit _____. Time and date of site emergency classification is _____.

The basic problem is _____.

The plant status is (stable) (improving) (degrading) (not known).

There (has not been) (is potential for) (has been) (is presently) a radioactive (airborne) (liquid) release from the plant (at a level below that considered a public hazard) (at a level at which protective action is advisable). Recommended protective actions are (none) _____.

The affected population area is (none) _____.

My name is _____. This (is) (is not) a drill.

This (is) (is not) a drill.

Notifications:

| <u>Party</u> | <u>Person Responding</u> | <u>Time of Notification</u> | <u>Communicator's Initials</u> |
|--|--------------------------|-----------------------------|--------------------------------|
| Station Superintendent | _____ | _____ | _____ |
| Load Dispatcher | _____ | _____ | _____ |
| (Tell him to initiate call list "C") | | | |
| Pennsylvania Emergency Management Agency* (Blue phone or _____) | _____ | _____ | _____ |
| Maryland Civil Defense Agency (Blue phone or _____) | _____ | _____ | _____ |
| York County Emergency Management Agency (Blue phone or _____) | _____ | _____ | _____ |

APPENDIX 104-1 (Cont'd)
SITE EMERGENCY NOTIFICATION CHECKOFF LIST

| | | | |
|---|-------|-------|-------|
| Lancaster County Emergency Manage- ment Agency (Blue phone or _____) | _____ | _____ | _____ |
| Chester County Emer- gency Management Agency (Blue phone or _____) | _____ | _____ | _____ |
| Harford County Civil Defense Agency (Blue phone or _____) | _____ | _____ | _____ |
| Cecil County Civil Defense Agency (Blue phone or _____) | _____ | _____ | _____ |
| Pennsylvania State Police - York _____ | _____ | _____ | _____ |
| PA. BRP (White Phone or _____) | _____ | _____ | _____ |
| NRC Operations Center** (Red Phone) _____ | _____ | _____ | _____ |
| PSAPS Guard Sergeant _____ | _____ | _____ | _____ |

Time notification of parties above completed. _____

Verified by _____ Date _____
Emergency Director

File Sys-3-1.

- * Must notify PEMA by use of commercial telephone no. on backshifts.
(Blue phone not manned by PEMA on backshifts).
- ** If NRC previously notified during ALERT condition, the
assigned PO communicator continuously manning red phone in
control room should handle this notification automatically.
However, check with Control Room to be sure. This notifi-
cation is made.

APPENDIX EP 104-2
PERSONNEL CALL RECORD

[illegible]

APPENDIX EP 104-3
EMERGENCY EXPOSURE LIMITS

| <u>Function</u> | <u>Projected Whole Body Dose</u> | <u>Thyroid Dose</u> | <u>Authorized By</u> |
|---|--|-------------------------------|--------------------------|
| 1. Life Saving and Reduction of Injury | 75 rem* | 375 rem | Emergency** Director |
| 2. Operation of Equipment to Mitigate an Emergency | 25 rem* | 125 rem | Emergency** Director |
| 3. Protection of Health and Safety of the Public | 5 rem | 25 rem | Emergency Director |
| 4. Other Emergency Activities | 10 CFR 20 limits | 10 CFR 20 limits | Emergency Director |
| 5. Re-Entry/Re- covery Activities | Administrative Guide Lines | Administrative Guide Lines | N/A |

* Reference: EPA-520/1-75-001 Table 2.1

**Such exposure shall be on a voluntary basis

APPENDIX EP-104-4
SITE EMERGENCY DEESCALATION NOTIFICATION CHECK-OFF LIST

MESSAGE: This (is) (is not) a drill. This (is) (is not) a drill.

This is Peach Bottom Atomic Power Station calling to report a change in emergency action level. The site emergency has been deescalated to an (Unusual Event) (Alert). Time and date is _____. The basic problem is _____.

The plant status is (stable) (improving) (degrading) (not known). There (has been) (has not been) an (airborne) (liquid) radioactive release from the plant. Protective actions recommended are (none) _____.

. The affected population area is (none) _____.

. My name is _____. This (is)

(is not) a drill.

Notifications:

| Party | Person Responding | Time of Notification | Communicator's Initials |
|--|-------------------|----------------------|-------------------------|
| Station Superintendent | _____ | _____ | _____ |
| Load Dispatcher | _____ | _____ | _____ |
| (Tell him to initiate call list "C") | | | |
| Pennsylvania Emergency Management Agency* | _____ | _____ | _____ |
| (Blue phone or _____) | | | |
| Maryland Civil Defense Agency | _____ | _____ | _____ |
| (Blue phone or _____) | | | |
| York County Emergency Management Agency | _____ | _____ | _____ |
| (Blue phone or _____) | | | |
| Lancaster County Emergency Management Agency | _____ | _____ | _____ |
| (Blue phone or _____) | | | |

APPENDIX EP 104-4 (Cont'd)
SITE EMERGENCY DEESCALATION NOTIFICATION CHECKOFF LIST

Chester County Emer-
gency Management
Agency
(Blue phone or _____)

Harford County Civil
Defense Agency
(Blue phone or _____)

Cecil County Civil
Defense Agency
(Blue phone or _____)

Pennsylvania State
Police - York _____

PA BRP
(White Phone or _____)

NRC Operations Center**
(Red Phone) _____

PBAPS Guard Sergeant _____

Time notification of parties above completed. _____

Verified by _____ Date _____
Emergency Director

File Sys-3-1

* Must notify PEMA by use of commercial telephone no. on backshifts.
(Blue phone not manned by PEMA on backshifts).

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APR 13 1983

EP-105 GENERAL EMERGENCY RESPONSE

PURPOSE

To define the site response to a General Emergency.

REFERENCES

1. Peach Bottom Atomic Power Station Emergency Plan
2. NUPES 0654
3. EP-101 Classification of Emergencies

APPENDICES

- EP 105-1 General Emergency Checkoff List
- EP 105-2 Personnel Call Record
- EP 105-3 Emergency Exposure Limits (Emergency Plan Table 6.1)

PRECAUTIONS

1. Planned radiation exposures should be limited to the administrative guide levels in Appendix EP 105-4 Emergency Exposure Limits.

IMMEDIATE ACTIONS

1.0 Shift Supervision shall:

- 1.1 Assume the role of Interim Emergency Director.
- 1.2 Activate Emergency Teams as necessary if not already accomplished at an earlier emergency action level.
- 1.3 Contact the Station Superintendent and the Shift Technical Advisor, inform them of the situation.
- 1.4 Fill out Appendix EP 105-1 Standard Prompt Notification Form and give it to the Communicator (PO or higher classification)
- 1.5 Direct Communicator to commence notification of the appropriate parties as specified in Section 2.1 of this procedure. The Communicator shall man the NRC RFD Telephone on a

continuous basis if required by A-31. If communicator is required for urgent plant operations related to the emergency, the concurrence for securing the phone should be obtained from the NRC prior to securing this telephone.

- 1.6 If not already accomplished at the ALERT or SITE EMERGENCY stage, direct the shift clerk to activate the 60minute call list using EP 209 APP P. If shift clerk is not available, this function may be assigned to any available individual.
 - 1.7 Direct one of the on-shift I&C Technicians to activate the Technical Support Center and the Emergency Operations Facility in accordance with EP 201 and 203 if not already activated.
 - 1.8 Direct the Radiation Protection Team Leader to initiate on and offsite radiation surveys, as necessary, in accordance with EP 205B, Radiation Survey Groups, if not already done.
 - 1.9 Assign an Operations Support Center Coordinator (senior PO or APO available) if not already done and direct available shift personnel to report to the Operations Support Center and to activate it in accordance with EP 202, if habitable. If the Operations Support Center is NOT habitable, direct shift personnel to report to the Control Room.
 - 1.10 Closely monitor conditions to determine present hazards to personnel and potential accident conditions that may develop.
 - 1.11 If release has occurred, dispatch a plant survey team member to obtain a site boundary dose rate as soon as practicable.
 - 1.12 If necessary, initiate implementation of EP-317 and EP-316, Direct Recommendations to County Emergency Management Agencies, and Cumulative Population Dose Calculations.
- 2.0 Communicator shall:
- 2.1 Perform notifications on Appendix EP 105-1 using the Standard Prompt Notification Message included. See EP 209, Appendix A, for telephone numbers.
 - 2.2 Report to the Emergency Director when the notifications are completed.
 - 2.3 Man the RED NRC telephone if required by A-31 until situation stabilizes and RED telephone communications may be secured.
- 3.0 Operations Support Center Coordinator or his designee shall:
- 3.1 Activate the Operations Support Center, if it is habitable, in accordance with EP 202. If the Operations Support Center is NOT habitable report to the Control Room.

4.0 Radiation Protection Team Leader shall:

- 4.1 Initiate on and off site radiation surveys in accordance with EP 205B, Radiation Survey Groups when directed by the Emergency Director. If this person is also the HP Engineer, he should report to the EOP to coordinate this function.

5.0 Shift I&C Technicians shall:

- 5.1 Activate the TSC and EOP (if not already activated during ALERT or SITE EMERGENCY stage) in accordance with EP 201 and EP 203.

6.0 Shift Clerk shall:

- 6.1 If not already implemented during ALERT or SITE EMERGENCY stage, contact individuals on EP 209 APP P to call in those individuals to man the TSC and EOP (60 minute call list). Document contacts on EP 209 APP P.
- 6.2 Inform Interim Emergency Director or Emergency Director when contacts are completed.

FOLLOW-UP ACTIONS

1.0 Emergency Director shall:

- 1.1 Periodically evaluate the event classification in accordance with EP 101, Classification of Emergencies. If the conditions change, deescalate to an appropriate classification.
- 1.2 Obtain results of the Cumulative Population Dose Calculations offsite radiation surveys from the Radiation Protection Team Leader. Obtain onsite and Plant Survey Radiation Surveys from the Personnel Safety Team Leader.
- 1.3 Referring to EP-317, provide appropriate information from the previous evaluations and Protective Action recommendations to a Communicator in the EOP for notification of the Bureau of Radiation Protection.
- 1.4 Perform actions as necessary to mitigate conditions of the emergency situation.
- 1.5 If not already performed, determine which additional support personnel are necessary for emergency functions and direct the shift clerk or other assigned person to contact those personnel.
- 1.6 Provide site personnel with PA speaker announcements for any major changes in plant emergency status, such as changing emergency action levels.
- 1.7 Direct the evacuation of affected areas, as necessary.

Refer to the following procedures:

GP 15 Local Evacuation

EP 303 Partial Plant Evacuation

EP 306 Evacuation of the Information Center

2.0 Station Superintendent shall:

- 2.1 Report to the Technical Support Center or Control Room, for a briefing of the situation.
- 2.2 Assume the role of Emergency Director (if not already done) by formally relieving the Interim Emergency Director. Announce that he has assumed the role of Emergency Director to the assembled Technical Support Center personnel.
- 2.3 Verify the emergency classification.
- 2.4 Verify that the Technical Support Center, Emergency Operations Facility and the Operations Support Center have been activated.

3.0 Operations Support Center Coordinator shall:

- 3.1 Notify the Interim Emergency Director when the Operations Support Center is activated.
- 3.2 Support the Control Room and Shift Supervision as necessary.

4.0 Radiation Protection Team Leader shall:

- 4.1 Notify the Emergency Director when the Emergency Operations Facility is activated.
- 4.2 Report progress and results of Cumulative Population Dose Calculations and off site radiation surveys to the Emergency Director, as necessary.
- 4.3 Notify the Site Emergency Coordinator of the need for assistance from Radiation Management Corporation.

5.0 Shift Clerk or other assigned person shall:

- 5.1 When requested, notify additional support personnel to report to the plant as directed by the Emergency Director. Refer to EP 209.
- 5.2 Notify Emergency Director or Site Emergency Coordinator when additional support personnel have been notified. Document on APP EP-105-2.

6.0 I&C Technicians shall: (if not already performed as per

EP-103 or EP-104)

6.1 Inform the Emergency Director when centers are activated.

6.2 Man the TSC and EOF data display (OCTV) positions as directed by the Emergency Director.

7.0 Personnel Safety Team Leader shall:

7.1 Report progress and results of on-site and plant surveys.

7.2 Radiation surveys to the Emergency Director as necessary.

APPENDIX EP 105-1
GENERAL EMERGENCY NOTIFICATION CHECKOFF LIST

Message: This (is) (is not) a drill. This (is) (is not) a
drill. This is Peach Bottom Atomic Power Station calling to report
a General Emergency has been declared on Unit No. _____. Time
and date of General Emergency classification is _____. The
basic problem is _____.
The plant status is (stable) (improving) (degrading) (not known).
There (is presently) (has not been) (is potential for) (has been)
a radioactive (airborne) (liquid) release from the plant (at a level
below that considered a public hazard) (at a level at which protective
action is advisable). Recommended protective actions are (none)
_____. The affected population
area is (none) _____. My
name is _____. This (is) (is not) a
drill. This (is) (is not) a drill.

Notifications:

| <u>Party</u> | <u>Person</u> <u>Responding</u> | <u>Time of</u> <u>Notification</u> | <u>Communicator's</u> <u>Initials</u> |
|---|------------------------------------|---------------------------------------|--|
| Station Superintendent | _____ | _____ | _____ |
| Load Dispatcher | _____ | _____ | _____ |
| (Tell him to initiate call list "C") | | | |
| Pennsylvania Emergency Management Agency* (Blue phone or _____) | _____ | _____ | _____ |
| Maryland Civil Defense Agency (Blue phone or _____) | _____ | _____ | _____ |
| York County Emergency Management Agency (Blue phone or _____) | _____ | _____ | _____ |

APPENDIX EP 105-1 (Cont'd)
GENERAL EMERGENCY NOTIFICATION CHECKOFF LIST

Lancaster County
Emergency Management
Agency
(Blue phone or _____)

Chester County
Emergency Management
Agency
(Blue phone or _____)

Harford County Civil
Defense Agency
(Blue phone or _____)

Cecil County Civil
Defense Agency
(Blue phone or _____)

Pennsylvania State
Police - York _____

PA BRP
(White Phone or _____)

NRC Operations Center**
(Red Phone) _____

PBAPS Guard
Sergeant _____

Time notification of parties above completed _____.

Verified By _____ Date _____
Emergency Director

File - Sys-3-1

* Must notify PEMA by use of commercial telephone no. on backshifts.
(Blue phone not manned by PEMA on backshifts.)

** If NRC previously notified during Alert or Site Emergency condition, the assigned PO communicator continuously manning the red phone in Control Room should handle this notification automatically. However, check with Control Room to be sure this notification is made.

APPENDIX EP 105-3
EMERGENCY EXPOSURE LIMITS

| <u>Function</u> | <u>Projected Whole Body Dose</u> | <u>Thyroid Dose</u> | <u>Authorized By</u> |
|--|--|------------------------------|--------------------------|
| 1. Life Saving and Reduction of Injury | 75 rem* | 375 rem | Emergency** Director |
| 2. Operation of Equipment to Mitigate an Emergency | 25 rem* | 125 rem | Emergency** Director |
| 3. Protection of Health and Safety of the Public | 5 rem | 25 rem | Emergency Director |
| 4. Other Emergency Activities | 10 CFR 20 limits | 10 CFR 20 limits | Emergency Director |
| 5. Re-Entry/Recovery Activities | Administrative Guidelines | Administrative Guidelines | N/A |

*Reference: EPA-520/1-75-001 Table 2.1

**Such exposure shall be on a voluntary basis

APPENDIX EP-105-4
GENERAL EMERGENCY DEESCALATION NOTIFICATION CHECK-OFF LIST

Message: This (is) (is not) a drill. This (is) (is not) a drill.

This is Peach Bottom Atomic Power Station calling to report a change in emergency action level. The General Emergency has been deescalated to an (Unusual Event) (Alert) (Site Emergency). Time and date is _____.

The basic problem is _____.

The plant status is (stable) (improving) (degrading) (not known).

There (has been) (has not been) an (airborne) (liquid) radioactive release from the plant. Protective actions recommended are (none)








The affected population area is (none) _____

_____. My name is _____. This (is) (is not) a drill.

Notifications:

| Party | Person Responding | Time of Notification | Communicator's Initials |
|--|----------------------|-------------------------|----------------------------|
| Station Superintendent | _____ | _____ | _____ |
| Load Dispatcher | _____ | _____ | _____ |
| (Tell him to initiate call list "C") | | | |
| Pennsylvania Emergency Management Agency* | _____ | _____ | _____ |
| (Blue phone or _____) | _____ | _____ | _____ |
| Maryland Civil Defense Agency | _____ | _____ | _____ |
| (Blue phone or _____) | _____ | _____ | _____ |
| York County Emergency Management Agency | _____ | _____ | _____ |
| (Blue phone or _____) | _____ | _____ | _____ |

APPENDIX EP-105-4 (Cont'd)
GENERAL EMERGENCY DEESCALATION NOTIFICATION CHECK-OFF LIST

| | | | |
|---|---|-------|-------|
| Lancaster County Emergency Manage- ment Agency. (Blue phone or |  | _____ | _____ |
| Chester County Emer- gency Management Agency (Blue phone or |  | _____ | _____ |
| Harford County Civil Defense Agency (Blue phone or |  | _____ | _____ |
| Cecil County Civil Defense Agency (Blue phone or |  | _____ | _____ |
| Pennsylvania State Police - York  | _____ | _____ | _____ |
| PA. BRP (White Phone or |  | _____ | _____ |
| NRC Operations Center** (Red Phone) | _____ | _____ | _____ |
| PBAPS Guard Sergeant  | _____ | _____ | _____ |

Time notification of parties above completed. _____

Verified by _____ Date _____
Emergency Director

File Sys-3-1

* Must notify PEMA by use of commercial telephone no. on backshifts.
(Blue phone not manned by PEMA on backshifts).

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APR 13 1983

EP-207A SEARCH AND RESCUE

PURPOSE:

To define the requirements and provide the guidance to conduct search and rescue operations.

REFERENCES:

1. Peach Bottom Atomic Power Station Emergency Plan

| <u>Section</u> | <u>Title</u> |
|----------------|-----------------------------------|
| 5.2.1.5.7 | Personnel Safety Team |
| 5.2.1.5.7.1 | First Aid/Search and Rescue Group |

2. NUREG 0654
Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants.
3. EP 401
Entry for Emergency Repair, Operations, and Search and Rescue

APPENDIX

- | | |
|-----------|--|
| EP 207A-1 | Emergency Exposure Limits (Emergency Plan Table 6.1) |
| EP-207A-2 | First Aid Equipment Locations in Power Block |

ACTION LEVEL

Activate The Search and Rescue phase of the First Aid/Search and Rescue Group whenever personnel are known to be missing or in need of help. Also, implement the Health Physics aspects of EP 401, Entry for Emergency Repair, Operations, and Search and Rescue, and appropriate aspects of EP 207C, First Aid, in conjunction with this procedure.

PRECAUTIONS

1. Personnel will participate in search and rescue operations

on a voluntary basis.

2. Adhere to proper radiological controls as much as practicable during search and rescue operations. This activity is exempt from Radiological Work Permit (RWP) requirements.
3. Limit personnel exposure to the administrative guide levels in Appendix EP 207A-1, Emergency Exposure Limits. The Emergency Director shall approve exposures in excess of quarterly Peach Bottom guidelines. The Personnel Safety Team shall ensure control their own exposures in accordance with ALARA concepts.
4. Requirements of HPO/CO-4, Radiation Work Permits, are not applicable. The HP accompanying the search and rescue team will serve as the RWP.

IMMEDIATE ACTIONS

1.0 Personnel Safety Team Leader shall:

- 1.1 Select volunteers from those available in the assembly area (OSC, PUB, TSC, or North Substation) with first preference to be members of the Personnel Safety Team to form First Aid/Search and Rescue Groups. Each group shall consist of at least three members; two must be qualified in first aid and one must be a Health Physics Technician. All should be familiar with the plant. One must also be multimedia qualified.
- 1.2 Appoint the most qualified person of the three to be the First Aid/Search and Rescue Group Leader and to carry out Section 2.0 of this procedure.
- 1.3 Inform the Interim Emergency Director or the Emergency Director that First Aid/Search and Rescue groups have been formed and of their intentions to enter the plant for search and rescue operations. (Attempt to locate missing person(s) by utilizing plant paging system just prior to actually dispatching the Search and Rescue group(s).
- 1.4 If necessary, obtain exposure limits from the Emergency Director. If later search and rescue operations are necessary, the Emergency Director shall adjust the radiation exposure limits accordingly. If waiting for Emergency Director approval could endanger personnel, the First Aid/Search and Rescue Group Leader may decide to remove injured person.
- 1.5 Coordinate First Aid/Search and Rescue groups to minimize duplication of effort and unnecessary radiation exposure. (Appendix EP-207A-2 contains listing of first aid equipment available within the power block area).
- 1.6 If offsite medical help is necessary, request the Emergency Director to contact the ambulance, hospital or physician in accordance with EP 207C, First Aid (Immediate Actions Section 4.0).

- 1.7 Recall the First Aid/Search and Rescue groups when their operations are no longer necessary.

2.0 First Aid/Search and Rescue Group Leader shall:

- 2.1 Ensure that each member has the necessary proper respiratory equipment, radsurvey equipment, anti-contamination clothing, and personal dosimetry. This material can be obtained from emergency survey kits at PUB, North Substation, Delta Service Building, or Emergency Operations Facility. Confirm proper equipment, clothing, and dosimetry with the Personnel Safety Team Leader.
- 2.2 Obtain the following information prior to performing search and rescue operations:
 - a. number of missing persons.
 - b. name of individuals
 - c. last known location of individuals
 - d. the job being worked
 - e. any significant plant conditions that may affect the search and any special instructions
- 2.3 Ensure the group is equipped with a first aid kit, or can get one enroute.
- 2.4 Lead the group to the last known location of the missing individual. If necessary, expand the search to adjacent areas. Ensure most expeditious routes available are taken to minimize team exposure.
- 2.5 Inform the Personnel Safety Team Leader of the actions of the group and whenever the group locates any missing personnel.
- 2.6 Direct administration of first aid as necessary and transport or escort the individual to a safe location as soon as possible. If necessary, notify the Personnel Safety Team Leader of the need for offsite medical assistance.
- 2.7 Report to the designated assembly and inform the Personnel Safety Team Leader when the First Aid/Search and Rescue Group has completed its task.

APPENDIX EP 207A-1
EMERGENCY EXPOSURE LIMITS

| <u>Function</u> | <u>Projected Whole Body Dose</u> | <u>Thyroid Dose</u> | <u>Authorized By</u> |
|--|--|------------------------------|--------------------------|
| 1. Life Saving and Reduction of Injury | 75 rem* | 375 rem | Emergency** Director |
| 2. Operation of Equipment to Mitigate an Emergency | 25 rem* | 125 rem | Emergency** Director |
| 3. Protection of Health and Safety of the Public | 5 rem | 25 rem | Emergency Director |
| 4. Other Emergency Activities | 10 CFR 20 limits | 10 CFR 20 limits | Emergency Director |
| 5. Re-Entry/Recovery Activities | Administrative Guidelines | Administrative Guidelines | N/A |

*Reference: EPA-520/1-75-001 Table 2.1

**Such exposure shall be on a voluntary basis

APPENDIX EP-207A-2

FIRST-AID RELATED EQUIPMENT IN POWER BLOCK

| | | <u>Stretchers</u> | <u>First Aid Kits</u> | <u>Blankets</u> |
|-----------------------------|------------|-------------------|-----------------------|-----------------|
| Unit 2 Rx Bldg Elevator | Stairwells | | | |
| | 116' Elev | X | X | X |
| | 135' Elev | X | X | X |
| | 165' Elev | X | X | X |
| | 195' Elev | X | X | X |
| | 234' Elev | X | X | X |
| Unit 3 Rx Bldg Elevator | Stairwells | | | |
| | 116' Elev | X | X | X |
| | 135' Elev | X | X | X |
| | 165' Elev | X | X | X |
| | 195' Elev | X | X | X |
| | 234' Elev | X | X | X |
| Turbine Bldg Elevator | | | | |
| | 116' Elev | | X | |
| | 135' Elev | | X | |
| | 150' Elev | | X | |
| | 165' Elev | | X | |
| Turbine Bldg | | | | |
| Laundry Room | 116' Elev | X | X | X |
| Radwaste Bldg | | | | |
| Medical/Decon Room | 135' Elev | X* | X | |
| Diesel Gen Bldg (Each Room) | | | X | |
| Emergency Cooling Tower | | X | | |
| 2SU Switchgear Bldg | | X | | |
| 3SU Switchgear Bldg | | X | | |

* 2 Orthopedic stretchers located here.

NOTE: 1/2 mile rays (emergency flashlights) are located just outside door to Unit 2 side of main control room in cabinet.

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BEACH BOTTOM UNITS 2 AND 3
EMERGENCY PLAN IMPLEMENTING PROCEDURE

APR 13 1

EP-312 RADIOACTIVE LIQUID RELEASE (EMERGENCY DIRECTOR FUNCTIONS)

PURPOSE:

To prescribe the actions of the Emergency Director in the event of an excessive radioactive liquid release. The Site Emergency Coordinator shall assume these responsibilities upon activation of the Emergency Operations Facility.

REFERENCES:

Emergency Plan, Sec. 6 (Emergency Measures)
EP-209, Appendix J.
EP-318
EP-319

APPENDICES:

None

ACTION LEVELS:

An excessive radioactive liquid release occurs, as indicated by:

1. The Radwaste Effluent radiation recorder at the discharge to Conowingo Pond indicates a release rate of 500 times the maximum permissible concentration which is 5×10^{-5} uCi/cc for an unidentified isotope.
2. Sample measurements at the discharge structure indicate 500 times maximum permissible concentration which is 5×10^{-5} uCi/cc for an unidentified isotope.

PROCEDURE:

Immediate Actions:

1. The Shift Superintendent (or alternately, the Shift Supervisor) shall:
 - a. Assume the role of Interim Emergency Director and carry out the steps of EP-101 to classify the event. Depending on the classification of the emergency, carry out the steps of EP-104 or 105.

PROCEDURE: (continued)

- b. Take immediate steps to terminate the discharge and contain the hazard.
- c. Direct the Interim Radiation Protection Team to report to the discharge structure to obtain and analyze water samples.
- d. Direct the Interim Radiation Protection Team Leader to activate the Radiation Protection Team.
- e. Direct the Interim Offsite Survey Group Leader or Radiation Protection Team Leader to calculate the activity released and the resulting downstream concentrations, using EP 318-319 Dose Projections.

BE PREPARED TO NOTIFY DOWNSTREAM DOMESTIC WATER USERS IF REQUESTED TO DO SO BY THE BUREAU OF RADIATION PROTECTION - (see EP-209 App J)

FOLLOW-UP ACTIONS:

1. The Interim Emergency Director or Emergency Director shall direct continued surveillance of the discharge structure equipment and initiate required decontamination efforts as soon as possible.
2. The Site Emergency Coordinator shall:
 - a. Direct the Radiation Protection Team Leader to dispatch survey teams to obtain water samples off-site, primarily at the following downstream public water system intakes:
 - (1) Chester Water Authority
 - (2) Baltimore Water Supply Bureau
 - (3) Conowingo Village
 - (4) Rainbridge Naval Training Center/Port Deposit
 - (5) Perry Point Veteran's Hospital
 - (6) Havre-de-Grace
 - (7) Perryville
 - b. Direct that a log be kept to indicate the time of samples and measured radioactive concentrations at appropriate locations along the pond, including all public water system intakes.
 - c. Direct the Interim Radiation Protection Team or Offsite Survey Group to calculate the estimated time of maximum radioactive concentrations at various public water system intakes using EP-318.
 - d. Direct the Emergency Operations Facility Communicator to notify downstream domestic water users if requested to do so by the Bureau of Radiation Protection (see EP-209, Appendix J).

Director Emergency
SS - 311 Preparedness Section

EP-318: LIQUID RELEASE DOSE CALCULATION METHOD FOR INTAKE WATER AT
OFFICE DOWNSTREAM FACILITIES

APR 13 1983

1. Purpose:

To determine liquid release dose projections based on undiluted effluent samples and diluted samples from the discharge canal for drinking water.

2. References:

EP-312 Radioactive Liquid Release
NUREG 0133
Reg. Guide 1.109

3. Definitions

- D_T = The cumulative dose commitment to the total body or any organ, T, from liquid effluents for the total time period in mrem.
- C_i = The average concentration of radionuclide, i, in an undiluted liquid effluent sample or diluted sample from the discharge canal during time period t from any liquid release in uCi/ml.
- F = The near field dilution factor for C during any liquid effluent release. Defined as the ratio of the volume of undiluted liquid waste released in gallons over t to the volume of water flow from the discharge canal in gallons per minute over t. $F = 1.0$ for a diluted liquid release.
- ΔT = The length of the time period over which C_i and F are averaged for the liquid release in hours.
- A = The site related ingestion dose commitment factor to the total body or organ, T, for each radionuclide in mrem-ml per uCi-hr.
- D_F = The ratio of the concentration at Location III (downstream from plant site) for the flow rate of interest to the concentration at the location of interest for the same time and flow rate.

4. Procedure:

Dose contributions from liquid effluents released to unrestricted areas shall be calculated for drinking water using the equation below:

$$D_T = \frac{\{A \Delta t C F\}}{D_F}$$

1. Record time period over which C & F are averaged. 1. _____
2. Record volume of release over ΔT . 2. _____
3. Record volume of water flow from discharge canal over ΔT . 3. _____
4. Calculate F. (worksheet) 4. _____
5. Record C_i for each nuclide in $\mu\text{Ci/ml}$.

Co-60 _____
I-131 _____
Cs-134 _____
Cs-137 _____

6. Record A for each nuclide for total body or organ (see Table 1)

TOTAL BODY LIVER THYROID

Co-60

I-131

Cs-134

Cs-137

7. Record current river flow 7. _____

8. Record D_f for corresponding river flow (7) and point of interest (See Table 2)

Baltimore Water Intake _____
 Chester Water Intake _____
 Conowingo Tailrace _____

9. Calculate D for each nuclide to total body or organ (worksheet) and sum together.

10. Record dose projection.

Baltimore Water Intake _____ mRem
 Chester Water Intake _____ mRem
 Conowingo Tailrace _____ mRem

11. To obtain concentration at point of interest divide dose commitment for each nuclide (at a specific point of interest) by A and ΔT .

$$\begin{array}{l} \text{e.g. mRem} \times \frac{\mu\text{Ci-hr}}{\text{mRem-ml}} \times \frac{1}{\text{hr.}} = \frac{\mu\text{Ci}}{\text{ml}} \\ \text{I-131} \\ \text{Baltimore} \end{array}$$

TABLE 1: A-Dose Commitment Factors (mrem-ml per
uCi-hr)

| | <u>TOTAL BODY</u> | <u>LIVER</u> | <u>THYROID</u> |
|--------|--------------------|--------------------|--------------------|
| Co-60 | 4.8×10^2 | 2.15×10^2 | — |
| I-131 | 4.02×10^2 | 7.18×10^2 | 2.98×10^5 |
| Cs-134 | 1.09×10^4 | 1.36×10^4 | — |
| Cs-137 | 6.43×10^3 | 1.02×10^4 | — |

TABLE 2: D_F - Dilution Factors

| <u>River Flow</u> <u>(CFS)</u> | <u>Baltimore Water</u> <u>Intake</u> | <u>Chester Water</u> <u>Intake</u> | <u>Conowingo</u> <u>Tailrace</u> |
|-----------------------------------|---|---------------------------------------|-------------------------------------|
| 2500 | 8.0×10^1 | 4.0 | 1.12×10^2 |
| 5000 | 7.50×10^1 | 9.09 | 7.50×10^1 |
| 10,000 | 8.63×10^1 | 2.23×10^1 | 5.31×10^1 |
| 15,000 | 8.56×10^1 | 3.85×10^1 | 4.28×10^1 |
| 25,000 | 8.46×10^1 | 9.30×10^1 | 4.28×10^1 |
| 50,000 | 9.29×10^1 | 4.33×10^2 | 2.50×10^1 |
| 100,000 | 1.05×10^2 | — | 2.20×10^1 |
| 150,000 | 1.04×10^2 | — | 2.0×10^1 |

WORKSHEET

Calculate F = $\frac{\text{Volume of Release Over } \Delta T}{\text{Volume of Water Flow from Discharge Canal Over } T}$

Calculate D = $\frac{A \Delta t \text{ CF-}}{}$

D (Co-60) =

D (I-131) =

D (Cs-134) =

D (Cs-137) =

$\frac{(D)}{D} =$ _____

Time of Maximum Concentration (hours after release)

| Average River Flow (cfs) | Location | | | |
|-----------------------------------|-------------------------------------|----------------------------|------------------------------|--------------------------------------|
| | PBAPS Cooling Water Intake | Chester Water Intake | Baltimore Water Intake | Conowingo Powerhouse Tailrace. |
| 2,500 | 12 | 144 | 208 | 193 |
| 5,000 | 12 | 70 | 110 | 100 |
| 10,000 | 12 | 33 | 61 | 53 |
| 15,000 | — | 21 | 45 | 38 |
| 25,000 | — | 11 | 31 | 25 |
| 50,000 | — | 4 | 22 | 16 |
| 100,000 | — | — | 17 | 12 |
| 150,000 | — | — | 15 | 10 |

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EP-319

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LIQUID RELEASE DOSE CALCULATION METHOD FOR FISH

APR 13 1983

1. Purpose:

To determine liquid release dose projections for fish based on undiluted effluent samples and diluted samples from the discharge canal.

2. References:

EP-312 Radioactive Liquid Release
NUREG-0133
Reg. Guide 1.109

3. Definitions

- D_T = The cumulative dose commitment to the total body or any organ, T, from liquid effluents for the total time period in mrem.
- C_i = The average concentration of radionuclide, i, in an undiluted liquid effluent sample or diluted sample from the discharge canal during time period Δt from any liquid release in $\mu\text{Ci/ml}$.
- F = The near field dilution factor for C during any liquid effluent release. Defined as the ratio the volume of undiluted liquid waste released in gallons over t to the volume of water flow from the discharge canal in gallons per minute over Δt . $F = 1.0$
- ΔT = The length of the time period over which C_i and F are averaged for the liquid release in hours.
- A = The site related ingestion dose commitment factor to the total body or organ, T, for each radionuclide in mrem-ml per $\mu\text{Ci-hr}$.

4. Procedure:

Dose contributions from liquid effluents released to unrestricted areas shall be calculated using the equation below:

$$D = \{A \Delta t C F -$$

1. Record time period over which C & F are averaged.

1. _____

2. Record volume of release over Δt . 2. _____
3. Record volume of water flow from discharge canal over Δt . 3. _____
4. Calculate F. (worksheet) 4. _____
5. Record C for each nuclide in $\mu\text{Ci/ml}$.

P-32 _____
Co-60 _____
I-131 _____
Cs-134 _____
Cs-137 _____

6. Record A for each nuclide for total body or organ (see Table 1)

| <u>TOTAL BODY</u> | <u>LIVER</u> | <u>THYROID</u> |
|-------------------|--------------|----------------|
|-------------------|--------------|----------------|

Co-60

I-131

Cs-134

Cs-137

7. Calculate D_T for each nuclide, to total body or organ (worksheet).

8. Record dose projection. 8. _____

NOTE: Highest exposure individuals for total body, liver, and thyroid are adult, teenager and child respectively.

TABLE 1: A-Dose Commitment Factors (mrem-ml per
uCi-hr)

| | TOTAL BODY | LIVER | THYROID |
|--------|--------------------|--------------------|--------------------|
| P-32 | 5.93×10^4 | 1.04×10^5 | ———— |
| Co-60 | 6.51×10^2 | 2.92×10^2 | ———— |
| I-131 | 1.12×10^2 | 1.99×10^2 | 8.28×10^4 |
| Cs-134 | 6.72×10^5 | 8.33×10^5 | ———— |
| Cs-137 | 3.97×10^5 | 6.30×10^5 | ———— |

WORKSHEET

Calculate $F = \frac{\text{Volume of Release Over } \Delta T}{\text{Volume of Water Flow from Discharge Canal Over } T}$

Calculate $D_T = \frac{\{A \ t \ CF -$

$D_T(P-32) =$
 $D_T(Co-60) =$

$D_T(I-131) =$

$D_T(Cs-134) =$

$D_T(Cs-137) =$

$(D)_T = \underline{\hspace{2cm}}$

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PEACH BOTTOM UNITS 2 AND 3

APR 13 1983

EMERGENCY PLAN IMPLEMENTING PROCEDURE

EP-401 ENTRY FOR EMERGENCY REPAIR AND OPERATIONS

PURPOSE

To define the method for providing instructions for entering areas that have become adversely affected by the emergency conditions. This procedure is for use during emergency repair operations.

REFERENCES

1. Peach Bottom Atomic Power Station Emergency Plan

| <u>Section</u> | <u>Title</u> |
|----------------|---------------------------|
| 5.2.1.5.5 | Radiation Protection Team |
| 5.2.1.5.7 | Personnel Safety Team |
| 6.7.1.1.5 | Monitoring of Evacuees |
| 6.1.0.2 | Re-entry |

2. NUREG 0654 Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants.

3. Health Physics Operating/Chemistry Operating Procedures

| <u>Number</u> | <u>Title</u> |
|---------------|--------------------------------|
| HPO/CO-4 | Radiation Work Permits |
| HPO/CO-9 | Respiratory Protection Program |

4. EP-313 Control of Thyroid Blocking (KI) Tablets

APPENDIX

EP 401-1 Emergency Exposure Limits (Emergency Plan Table 6.1)

ACTION LEVEL

This procedure is implemented whenever personnel must enter an area of unknown radiological hazards for reasons of emergency operation of equipment or repairs.

PRECAUTIONS

1. A minimum of two people will be assigned to an entry team and at no time will anyone be allowed to travel through a potentially high radiation area unless they are within sight of another team member.
2. For emergency operation or repair activities, personnel exposure should not exceed the limits of Appendix EP 401-1, Emergency Exposure Limits.
3. Personnel who may exceed the exposure of 25 Rem will do so on a voluntary basis.
4. Exposure to radiation greater than the limits imposed by the Peach Bottom Atomic Power Station limits or limits from 10 CFR 20 should be authorized by the Emergency Director.
5. Personnel performing an entry will be aware of the possible hazards associated with exceeding a dose of 25 Rem.
6. Monitor personnel exposure closely with the personal dosimeter.
7. Requirements of HPO/CO-4, Radiation Work Permits, are not applicable.
8. KI administration may be required prior to entry for emergency repair operations. (See EP-313 for details)
9. Normal blocking procedure may be waived by Emergency Director in carrying out this procedure.

IMMEDIATE ACTIONS

1.0 Entry Team Leader shall:

- 1.1 Determine what task has to be performed and how many people will be required to complete the task.
- 1.2 Have the team members assemble the necessary tools and spare parts that will be required for the task.
- 1.3 Request the Emergency Director to provide maximum allowable dose and a projected stay time.

- 1.4 Have the Personnel Safety Team Leader determine what type of respiratory and protective clothing will be required for the entry.

NOTE: Follow good health physics practices as much as practicable consistent with the urgency of the task.

- 1.5 Equip the team members with the necessary personal dosimetry.
- 1.6 Have the Plant Survey Group Leader provide a health physics qualified individual to accompany each team. Equip this individual with a high range, beta-gamma detector (such as a Teletector) and monitor for the expected radiation levels.
- 1.7 Arrange for relief of personnel as necessary.
- 1.8 Establish communications with the Control Room.
- 1.9 Enter the area and perform the task. Inform the Emergency Director of what has been done.

2.0 Entry Team (Operations or Repair) shall:

- 2.1 Assist the Team Leader in determining what has to be done, spare parts, tools, and how many people will be needed.
- 2.2 Assemble the necessary equipment required to perform the task.
- 2.3 Wear the appropriate respiratory and anti-contamination clothing deemed necessary by the Personnel Safety Team Leader.

NOTE: Follow guidance of HPO/CO-9, Respiratory Protection Program, consistent with the urgency of the emergency task.

3.0 Plant Survey Leader shall:

- 3.1 Brief the Entry Team members of the hazards of radiation doses in excess of 25 Rem to the whole body.
- 3.2 Contact the Radiation Protection Team Leader to determine if radioprotective drug (KI) administration is necessary and receive permission to obtain the necessary quantity and administer it to the team members. KI will be administered by HP&C Operations Support Center Coordinator in the plant.
- 3.3 Ensure that the teams have met all the necessary and anticipated radiation protection requirements prior to

entering a contaminated or radiation area.

- 3.4 During the team efforts, consult with the Control Room, log radiation levels as reported and compare these readings to those expected. Estimate the dose being received and advise the team of any members who may be close to exceeding a limit.
- 3.5 Keep the Personnel Safety Team Leader informed of plant conditions and radiation hazards.

APPENDIX EP 401-1
EMERGENCY EXPOSURE LIMITS

| <u>Function</u> | <u>Projected Whole Body Dose</u> | <u>Thyroid Dose</u> | <u>Authorized By</u> |
|--|--|------------------------------|--------------------------|
| 1. Life Saving and Reduction of Injury | 75 rem* | 375 rem | Emergency** Director |
| 2. Operation of Equipment to Mitigate an Emergency | 25 rem* | 125 rem | Emergency** Director |
| 3. Protection of Health and Safety of the Public | 5 rem | 25 rem | Emergency Director |
| 4. Other Emergency Activities | 10 CFR 20 limits | 10 CFR 20 limits | Emergency Director |
| 5. Re-Entry/Recovery Activities | Administrative Guidelines | Administrative Guidelines | N/A |

*Reference: EPA-520/1-75-001 Table 2.1

** Each exposure shall be on a voluntary basis